

CALIBRE™ 302-5

Polycarbonate Resin

Trinseo

Message:

CALIBRE™ 302-5 is a standard linear polycarbonate resin designed for solid sheet extrusion. CALIBRE™ 302-5 is also suitable for the production of low complexity multi wall sheet, such as two and three wall sheet. CALIBRE™ 302-5 contains a UV absorber additive, but note that sheets for outdoor applications also require a protective UV cap layer. It is recommended to coextrude a 50 µm thick UV cap layer, using CALIBRE™ 320UV.

Main Characteristics:

Excellent optical properties

Exceptional impact resistance

High heat resistance

Applications:

Solid and multi-wall sheet applications

General Information			
UL YellowCard	E54680-469961	E157291-238220	E206114-228276
Additive	UV Stabilizer		
Features	High Heat Resistance		
	High Impact Resistance		
	Opticals		
Uses	Sheet		
Forms	Pellets		
Processing Method	Injection Molding		
	Sheet Extrusion		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.0	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955, ISO 294-4
Water Absorption			ASTM D570, ISO 62
23°C, 24 hr	0.15	%	
Equilibrium, 23°C, 50% RH	0.32	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2410	MPa	ASTM D638
--	2400	MPa	ISO 527-2/50
Tensile Strength			
Yield ²	60.7	MPa	ASTM D638
Yield	61.0	MPa	ISO 527-2/50
Break ³	71.7	MPa	ASTM D638
Break	72.0	MPa	ISO 527-2/50
Tensile Elongation			

Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	170	%	ASTM D638
Break	170	%	ISO 527-2/50
Flexural Modulus			
-- ⁶	2340	MPa	ASTM D790
-- ⁷	2350	MPa	ISO 178
Flexural Strength			
-- ⁸	93.8	MPa	ASTM D790
-- ⁹	94.0	MPa	ISO 178
Taber Abrasion Resistance ¹⁰	5	%	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	71	kJ/m ²	
23°C	81	kJ/m ²	
Notched Izod Impact			ASTM D256
-30°C	590	J/m	
23°C	910	J/m	
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	150	°C	ISO 11357-2, ASTM D3418
Vicat Softening Temperature			
--	148	°C	ASTM D1525, ISO 306/B50 7 ¹¹
--	154	°C	ASTM D1525, ISO 306/A120 8 ¹²
CLTE - Flow (-40 to 82°C)	6.8E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating ¹³			UL 94
1.50 mm	HB		
3.00 mm	HB		
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542, ISO 489
Transmittance	86.0 to 90.0	%	ASTM D1003
Haze	1.0	%	ASTM D1003
NOTE			
1.	50 mm/min		
2.	50 mm/min		
3.	50 mm/min		
4.	50 mm/min		
5.	50 mm/min		
6.	Method I (3 point load), 2.0 mm/min		
7.	2.0 mm/min		

8.	Method I (3 point load), 2.0 mm/min
9.	2.0 mm/min
10.	CS10F Wheel, 250 g, 300 cycles
11.	Rate A (50°C/h), Loading 2 (50 N)
12.	Rate B (120°C/h), Loading 1 (10 N)
13.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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